



**Clean Copy of Claims, as Amended
in the Response to the Office Action
Dated July 12, 2002**

28. (Amended) An isolated protein comprising at least twelve contiguous amino acids of a conserved region of SEQ ID NO: 11 and one or more variable (V) region amino acids of SEQ ID NO: 11, wherein the isolated protein is not a wild-type NhhA polypeptide and wherein upon administration to a mammal the protein elicits an immune response against one or more strains of *N. meningitidis*.

25. (Amended) The isolated protein of claim 28, wherein the conserved region is selected from the group consisting of:

- (i) residues 1 to 50 of SEQ ID NO:11;
- (ii) residues 109 to120 of SEQ ID NO:11;
- (iii) residues 135 to198 of SEQ ID NO:11;
- (iv) residues 221 to 239 of SEQ ID NO:11; and
- (v) residues 249 to 604 of SEQ ID NO:11.

26. (Amended) The isolated protein of claim 28, wherein the protein comprises at least twelve contiguous amino acids of a sequence selected from the group consisting of SEQ ID NOs: 1-10.

27. (Amended) The isolated protein of claim 28, wherein the isolated protein has an amino acid sequence selected from the group consisting of:

- (i) residues 1 to 50 of SEQ ID NO: 1;
- (ii) residues 1 to 50 of SEQ ID NO: 2;
- (iii) residues 1 to 50 of SEQ ID NO: 3;
- (iv) residues 1 to 50 of SEQ ID NO: 4;
- (v) residues 1 to 50 of SEQ ID NO: 5;
- (vi) residues 1 to 50 of SEQ ID NO: 6;
- (vii) residues 1 to 50 of SEQ ID NO: 7;
- (viii) residues 1 to 50 of SEQ ID NO: 8;
- (ix) residues 1 to 50 of SEQ ID NO: 9;

- (x) residues 1 to 50 of SEQ ID NO: 10;
- (xi) residues 125 to 188 of SEQ ID NO: 1;
- (xii) residues 125 to 188 of SEQ ID NO: 2;
- (xiii) residues 122 to 185 of SEQ ID NO: 3;
- (xiv) residues 127 to 190 of SEQ ID NO: 4;
- (xv) residues 125 to 188 of SEQ ID NO: 5;
- (xvi) residues 132 to 195 of SEQ ID NO: 6;
- (xvii) residues 131 to 194 of SEQ ID NO: 7;
- (xviii) residues 131 to 194 of SEQ ID NO: 8;
- (xix) residues 127 to 190 of SEQ ID NO: 9;
- (xx) residues 125 to 188 of SEQ ID NO: 10;
- (xxi) residues 211 to 229 of SEQ ID NO: 1;
- (xxii) residues 206 to 224 of SEQ ID NO: 3;
- (xxiii) residues 237 to 591 of SEQ ID NO: 1;
- (xxiv) residues 237 to 592 of SEQ ID NO: 2;
- (xxv) residues 235 to 589 of SEQ ID NO: 3;
- (xxvi) residues 239 to 594 of SEQ ID NO: 4;
- (xxvii) residues 237 to 591 of SEQ ID NO: 5;
- (xxviii) residues 244 to 599 of SEQ ID NO: 6;
- (xxix) residues 243 to 598 of SEQ ID NO: 7;
- (xxx) residues 243 to 598 of SEQ ID NO: 8;
- (xxxi) residues 239 to 594 of SEQ ID NO: 9; and
- (xxxii) residues 237 to 592 of SEQ ID NO: 10.

29. (Amended) The isolated protein of claim 28, having an amino acid sequence selected from the group consisting of: SEQ ID NO: 23; SEQ ID NO: 24, SEQ ID NO: 25; SEQ ID NO: 26; SEQ ID NO: 27; SEQ ID NO: 33; SEQ ID NO: 34 SEQ ID NO: 35; SEQ ID NO: 36; SEQ ID NO: 37; SEQ ID NO: 38; and SEQ ID NO: 39.

30. (Amended) An allelic variant of the isolated protein of claim 28, having at least 80% amino acid sequence identity to the isolated protein.

31. (Amended) A pharmaceutical composition comprising one or more isolated proteins according to claim 28 and a pharmaceutically-acceptable carrier, diluent, or excipient.

32. (Amended) The pharmaceutical composition of claim 31 which is immunogenic.

33. (New) The isolated protein of claim 28, having the amino acid sequence SEQ ID NO: 23.

34. (New) A mature, processed form of the isolated protein of claim 33, having the amino acid sequence SEQ ID NO: 35.